

Application No.: 10/527,718
Attorney Docket No.: 32860-000863/US

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AMENDMENTS TO THE CLAIMS

Listing of claims:

1. (Currently Amended) A corvette vessel-type equipment system, comprising:
a vessel hull, matched to the corvette vessel-type equipment system on a size and requirement-specific basis, and having a plurality of vessel protection areas;
standard equipment segments, formed from standard units and components arranged in accordance with the requirements in the vessel hull of the corvette vessel-type equipment system, and installable in vessel hulls of different vessel-type equipment systems; and
a power generator segment including a first electrical system, the first electrical system including generators and internal combustion engines, by which the generators can be driven, arranged in adjacent compartments in one of the vessel protection areas.
2. (Currently Amended) The corvette vessel-type equipment system as claimed in claim 1, wherein a propulsion segment includes a combination of a POD propulsion segment in the form of a completely electrical lightweight POD propulsion system and having a power of 6 to 8 MW, and includes two waterjet propulsion segments in the form of twin waterjet propulsion systems and having a power of 12 to 16 MW.
3. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 1, wherein a propulsion segment includes a thruster segment.
4. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 2, wherein electric motors in at least one of a POD propulsion segment, a waterjet propulsion segment and a thruster segment are designed with windings composed of high-temperature superconductors.
5. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 2, wherein electric motors in at least one of a POD propulsion segment, waterjet

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propulsion segments and a thruster segment are in the form of synchronous machines with a field winding composed of high-temperature superconductors, and wherein the stator windings are in the form of air-gap windings.

6. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 2, wherein waterjet propulsion segments are equipped with a coaxial exhaust-gas nozzle segment.

7. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 2, wherein, in the longitudinal direction, a distance between the center of the POD propulsion segment and a nose of a traction propeller of the POD propulsion segment, and the nozzle outlet openings of the pods of waterjet propulsion segments, is at least 15 m or 14 m.

8. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 2, wherein the vessel hull is designed to broaden in the stern area of the vessel from the vessel center so that the weight of the POD propulsion segment and the weight of the associated equipment can be absorbed by way of it, with the vessel hull having, in the stern area of the vessel, a structure whose strength is sufficient to absorb the axial forces which occur as a result of the operation of the POD propulsion segment.

9. (Currently Amended) The corvette vessel-type equipment system as claimed in claims 1, whercin ~~a~~the power generator segment is formed from a combination of at least one of two fuel cell segments, each having a power of approximately 4.5 MW net or 6 MW gross, and generator segments, each having a power of approximately 16 MW.

10. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 9, wherein the generator segments include generators having windings composed of a high-temperature superconductor.

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11. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 9, wherein the generator segments include generators in the form of synchronous machines with a field winding composed of high-temperature superconductors, with the stator windings being in the form of air-gap windings.

12. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 9, wherein the two fuel cell segments include two air-breathing PEM fuel cells, associated, in order to supply them with hydrogen, with a diesel reformer with a power of approximately 9 MW.

13. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 9, wherein the two fuel cell segments include two air-breathing PEM fuel cells associated, in order to supply them with hydrogen, with two diesel reformers, each having a power of approximately 4.5 MW.

14. (Currently Amended) The corvette vessel-type equipment system as claimed in claim 1, wherein ~~a~~ the power generator segment is distributed over a number of ship protection areas SSB-2, SSB-3 and SSB-4 in the corvette vessel type equipment system.

15. (Currently Amended) The corvette vessel-type equipment system as claimed in claim 9, wherein a ~~first-second~~ electrical system with two air-breathing PEM fuel cells is arranged in a third ship protection area SSB-3 which is arranged between a bow-end vessel protection area SSB-4 and a vessel protection area SSB-2 amidships, close to the transition to the midships vessel protection area SSB-2.

16. (Currently Amended) The corvette vessel-type equipment system as claimed in claim 9, wherein a ~~first-second~~ electrical system having an air-breathing PEM fuel cell in a third vessel protection area SSB-3 is arranged between a bow-end vessel protection area SSB-4 and a midships vessel protection area SSB-2, close to the transition to the midships vessel protection

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area SSB-2, and a further electrical system with an air-breathing PEM fuel cell is arranged in the midships vessel protection area SSB-2.

17. (Currently Amended) The corvette vessel-type equipment system as claimed in claim-9 1, wherein ~~a second the first~~ electrical system includes one to four, generators and includes one to four, internal combustion engines, by which the generators can be driven, is arranged in adjacent compartments VI, VII in amidships vessel protection area SSB-2.

18. (Currently Amended) The corvette vessel-type equipment system as claimed in claim-17 1, wherein the internal combustion engines ~~gas turbines and the generators~~ for the ~~second~~first electrical system are arranged in ~~adjacent compartments VI, VII~~ in the midships vessel protection area SSB-2 gas turbines.

19. (Currently Amended) The corvette vessel-type equipment system as claimed in claims 9, wherein a diesel reformer center with a diesel reformer is arranged in ~~the a~~ bow-end vessel protection area SSB-4.

20. (Currently Amended) The corvette vessel-type equipment system as claimed in claim 9, wherein a diesel reformer center with a diesel reformer is arranged in ~~the a~~ midships vessel protection area SSB-2.

21. (Currently Amended) The corvette vessel-type equipment system as claimed in claim 9, wherein a first diesel reformer center with a diesel reformer is arranged in ~~the a~~ bow-end vessel protection area SSB-4, and a second diesel reformer center with a diesel reformer is arranged in ~~the a~~ midships vessel protection area SSB-2.

22. (Currently Amended) The corvette vessel-type equipment system as claimed in claim 9, wherein a first diesel reformer center with a diesel reformer is arranged in ~~the a~~ midships vessel protection area SSB-2, and a second diesel reformer center with a diesel

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reformer is arranged in the ~~a~~ third vessel protection area SSB-3, with an air-breathing fuel cell close to the transition to the midships vessel protection area SSB-2.

23. (Currently Amended) The corvette vessel-type equipment system as claimed in claim ~~18~~ 17, wherein double-walled bulk heads are arranged between the adjacent compartments VI, VII with the ~~gas turbines~~ internal combustion engines and the generators of the ~~second~~ first electrical system in the midships vessel protection area SSB-2.

24. (Currently Amended) The corvette vessel-type equipment system as claimed in claim ~~18~~ 17, wherein the ~~gas turbines~~ internal combustion engines in the compartment VI and the generators in the compartment VII for the ~~second~~ first electrical system are each separated from one another by a central longitudinal bulk head in the midships vessel protection area SSB-2.

25. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 2, wherein a POD propulsion system is designed for the vessel-type equipment system to travel at a continuous cruise speed of approximately 12 to 14 knots, and can be supplied with electrical power in this operating state by way of two fuel cell segments.

26. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 2, wherein waterjet propulsion segments are designed for the corvette vessel-type equipment system to travel at a top speed of approximately 30 knots, and can be supplied with electrical power in this operating state by way of the two gas-turbine-powered generators.

27. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 2, wherein waterjet propulsion segments can be supplied with electrical power from at least one of the fuel cell segments until the power limit of at least one of the fuel cell segments is reached in order to start up these waterjet propulsion segments with low emissions.

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28. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 2, wherein the system achieves speeds of more than 35 knots by operating a POD propulsion system and a waterjet propulsion segments simultaneously, in which case the distribution of the electrical power which is produced by way of the power generator segment can be achieved with optimized efficiency by way of the power distribution segment and energy management for an automation carrier system vessel.

29. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 2, wherein a power distribution segment is a propulsion network which is fed from fuel cells and by which a POD propulsion segment can be supplied with electrical power, and has a generator-fed propulsion network, by which the waterjet propulsion segments can be supplied with electrical power.

30. (Currently Amended) The corvette vessel-type equipment system as claimed in claim 29, wherein the propulsion network which is fed from fuel cells has a stern-end network section which is essentially associated with ~~the-a~~ stern-end vessel protection area SSB-1, and has a bow-end network section which is essentially associated with ~~the-a~~ third vessel protection area SSB-3 and can be connected to the stern-end network section via suitable coupling elements.

31. (Currently Amended) The corvette vessel-type equipment system as claimed in claim 29, wherein the generator-fed propulsion network is essentially associated with ~~the-a~~ midships vessel protection area SSB-2 and can be connected to the propulsion network, which is fed by way of fuel cells, by way of suitable coupling elements.

32. (Currently Amended) The corvette vessel-type equipment system as claimed in claim 30, wherein an auxiliary propulsion system, which is arranged in ~~the-a~~ bow-end vessel protection area SSB-4, can be supplied with electrical power by way of the bow-end network section of the propulsion network which is fed by way of fuel cells.

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33. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 29, wherein on-board network loads can be supplied with electrical power from the entire power generation segment, advantageously by way of the propulsion network which is fed by way of fuel cells.

34. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 29, further comprising low-voltage electrical systems, arranged in various vessel protection areas SSB-1, SSB-3 can be connected to both propulsion networks and can be connected to one another by way of suitable coupling elements.

35. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 1, wherein an automation segment includes an automation center which has a large number of terminals and a terminal bus, and has two or more servers, which are connected to the terminal bus and to a system bus, and to which control networks which are associated with different vessel protection areas SSB-1, SSB-2, SSB-3 and SSB-4 are connected.

36. (Currently Amended) The corvette vessel-type equipment system as claimed in claim 35, further comprising a first control network, essentially associated with the-a stern-end vessel protection area SSB-1 and with which the-a POD propulsion segment and the-a vessel operating engineering, provided in the stern-end vessel protection area SSB-1, are associated.

37. (Currently Amended) The corvette vessel-type equipment system as claimed in claim 36, further comprising a second control network, essentially associated with the-a midships vessel protection area SSB-2 and with which the-two gas-turbine-powered generators, the-two waterjet propulsion segments and the vessel operating engincering, provided in the midships vessel protection area SSB-2, are associated.

38. (Currently Amended) The corvette vessel-type equipment system as claimed in claim 37, further comprising a third control network, essentially associated with the-a third vessel

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protection area SSB-3 and the a bow-end vessel protection area SSB-4 and with which the two fuel cell segments, the diesel reformer, the thruster segment and the vessel operating engineering provided in the third vessel protection area SSB-3 and in the bow-end vessel protection area SSB-4, are associated.

39. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 1, wherein a propulsion segment includes a 0.3 MW bow jet thruster.

40. (Previously Presented) The corvette vessel-type equipment system as claimed in claim 2, wherein a propulsion segment includes a thruster segment.